An Analytical Model for VBIED Fragment Throw

Shih Kwang Tay, David Chng, Song Woei Liang

Ministry of Home Affairs, New Phoenix Park, 30 Irrawaddy Road, Singapore 329561, Singapore.

Key words: VBIED, Debris-throw, Hazard-distance. Analytical Model, Event Security Management.

The growing threat of terrorism requires security agencies to assess the weapon effects of Vehicle-borne Improvised Explosive Devices (VBIEDs), in order to design mitigation measures for building protection and determine safe stand-off distances from such threat for event security management. There is a lack of open source data especially on the debris effects from VBIED. To overcome this, a full scale VBIED test was conducted with debris pick up. An analytical model for the debris throw is then derived based on the collected data to provide qualitative hazard-distance predictions.